

**IN THE CLAIMS**

Please amend the claims as follows:

Claims 1-13 (canceled)

Claim 14 (currently amended): An ~~[[The]]~~ optoelectronic module ~~of Claim 10~~

comprising:

an optical device configured to emit or detect a light signal along a first optical path;

an electronic circuit connected to supply a drive signal to said optical device or to  
receive a signal detected by said optical device; and

an optical reflector configured to redirect said light signal substantially radially about  
said first optical path along a second optical path substantially transverse to said first optical  
path,

wherein said optical device, electronic circuit and optical reflector are assembled so as  
to be mounted as a unit to a main circuit board, and said optical reflector is a concave  
reflector.

Claim 15 (currently amended): An ~~[[The]]~~ optoelectronic module ~~of Claim 10~~

comprising:

an optical device configured to emit or detect a light signal along a first optical path;

an electronic circuit connected to supply a drive signal to said optical device or to  
receive a signal detected by said optical device; and

an optical reflector configured to redirect said light signal substantially radially about  
said first optical path along a second optical path substantially transverse to said first optical  
path,

wherein said optical device, electronic circuit and optical reflector are assembled so as to be mounted as a unit to a main circuit board, and said optical reflector is a convex reflector.

Claim 16 (currently amended): An [[The]] optoelectronic module of Claim 10 comprising:

an optical device configured to emit or detect a light signal along a first optical path;  
an electronic circuit connected to supply a drive signal to said optical device or to receive a signal detected by said optical device; and

an optical reflector configured to redirect said light signal substantially radially about said first optical path along a second optical path substantially transverse to said first optical path,

wherein said optical device, electronic circuit and optical reflector are assembled so as to be mounted as a unit to a main circuit board, and said optical reflector is a conical reflector.

Claim 17 (currently amended): An [[The]] optoelectronic module of Claim 10 comprising:

an optical device configured to emit or detect a light signal along a first optical path;  
an electronic circuit connected to supply a drive signal to said optical device or to receive a signal detected by said optical device; and

an optical reflector configured to redirect said light signal substantially radially about said first optical path along a second optical path substantially transverse to said first optical path,

wherein said optical device, electronic circuit and optical reflector are assembled so as to be mounted as a unit to a main circuit board, and said optical reflector is a paraboloid of revolution reflector.

Claim 18 (currently amended): An ~~[[The]]~~ optoelectronic module ~~of Claim 10~~  
comprising:

an optical device configured to emit or detect a light signal along a first optical path;  
an electronic circuit connected to supply a drive signal to said optical device or to  
receive a signal detected by said optical device; and  
an optical reflector configured to redirect said light signal substantially radially about  
said first optical path along a second optical path substantially transverse to said first optical  
path,

wherein said optical device, electronic circuit and optical reflector are assembled so as to be mounted as a unit to a main circuit board, and said optical reflector is a pyramidal reflector.

Claim 19 (currently amended): The optoelectronic module of Claim ~~[[10]]~~ 14,  
wherein said optical device comprises one or more light emitters.

Claim 20 (currently amended): The optoelectronic module of Claim ~~[[10]]~~ 19,  
wherein said one or more light emitters comprises one or more laser diodes.

Claim 21 (currently amended): The optoelectronic module of Claim ~~[[10]]~~ 14,  
wherein said optical device comprises an array of light emitters or light detectors.

Claim 22 (currently amended): The optoelectronic module of Claim ~~[[10]]~~ 14,  
wherein said optical device comprises one or more photodiodes.

Claim 23 (currently amended): The optoelectronic module of Claim [[10]] 14, further comprising one or more optical lenses interposed between said optical device and said optical reflector.

Claim 24 (original): The optoelectronic module of Claim 23 wherein said one or more optical lenses comprise a convergent lens.

Claim 25 (original): The optoelectronic module of Claim 23 wherein said one or more optical lenses comprise a divergent lens.

Claim 26 (original): The optoelectronic module of Claim 23 wherein said one or more optical lenses and said optical reflector are formed as different surfaces of a unitary optical element of light transmitting material.

Claim 27 (original): The optoelectronic module of Claim 26 wherein said unitary optical element has a lenticular top surface and an internally reflecting bottom surface.

Claims 28-36 (canceled)

Claim 37 (previously presented): An optoelectronic module comprising:  
an optical device configured to emit or detect a light signal along a first optical path;  
an electronic circuit connected to supply a drive signal to said optical device or to receive a signal detected by said optical device;  
an optical reflector configured to redirect said light signal along a second optical path substantially transverse to said first optical path; and  
one or more optical lenses interposed between said optical device and said optical reflector;  
said optical device, said electronic circuit and said optical reflector being assembled so as to be mounted as a unit to a main circuit board;

said one or more optical lenses and said optical reflector being formed as different surfaces of a unitary optical element of light transmitting material; and

said unitary optical element having a lenticular top surface and an internally reflecting bottom surface.

Claim 38 (new): The optoelectronic module of Claim 14, wherein said first optical path is directed so as to enter a hole in said main circuit board in a mounted condition of said unit and said optical reflector is arranged so as to direct said second optical path towards a side wall of said hole.

Claim 39 (new): The assembly of Claim 14, further comprising a substrate to which said optical device, electronic circuit and optical reflector are mounted.

Claim 40 (new): The optoelectronic module of Claim 39, wherein said substrate comprises a printed circuit interconnecting said electronic circuit and said optical device.

Claim 41 (new): The optoelectronic module of Claim 39, further comprising electrical contacts disposed on said substrate to mount and interconnect to a main circuit board.

Claim 42 (new): The optoelectronic module of Claim 41, wherein said electrical contacts are on an underside of said substrate.

Claim 43 (new): The optoelectronic module of Claim 42, wherein said electrical contacts are configured to surface-mount said unit to the said main circuit board.

Claim 44 (new): The optoelectronic module of Claim 39, wherein said electronic circuit is mounted to a top of said substrate.

Claim 45 (new): The optoelectronic module of Claim 39, wherein said substrate is a circuit board and said first optical axis is substantially perpendicular to said circuit board.

Claim 46 (new): The optoelectronic module of Claim 15, wherein said optical device comprises one or more light emitters.

Claim 47 (new): The optoelectronic module of Claim 46, wherein said one or more light emitters comprises one or more laser diodes.

Claim 48 (new): The optoelectronic module of Claim 15, wherein said optical device comprises an array of light emitters or light detectors.

Claim 49 (new): The optoelectronic module of Claim 15, wherein said optical device comprises one or more photodiodes.

Claim 50 (new): The optoelectronic module of Claim 15, further comprising one or more optical lenses interposed between said optical device and said optical reflector.

Claim 51 (new): The optoelectronic module of Claim 50, wherein said one or more optical lenses comprise a convergent lens.

Claim 52 (new): The optoelectronic module of Claim 50, wherein said one or more optical lenses comprise a divergent lens.

Claim 53 (new): The optoelectronic module of Claim 50, wherein said one or more optical lenses and said optical reflector are formed as different surfaces of a unitary optical element of light transmitting material.

Claim 54 (new): The optoelectronic module of Claim 53, wherein said unitary optical element has a lenticular top surface and an internally reflecting bottom surface.

Claim 55 (new): The optoelectronic module of Claim 15, wherein said first optical path is directed so as to enter a hole in said main circuit board in a mounted condition of said unit and said optical reflector is arranged so as to direct said second optical path towards a side wall of said hole.

Claim 56 (new): The assembly of Claim 15, further comprising a substrate to which said optical device, said electronic circuit and said optical reflector are mounted.

Claim 57 (new): The optoelectronic module of Claim 56, wherein said substrate comprises a printed circuit interconnecting said electronic circuit and said optical device.

Claim 58 (new): The optoelectronic module of Claim 56, further comprising electrical contacts disposed on said substrate to mount and interconnect to a main circuit board.

Claim 59 (new): The optoelectronic module of Claim 58, wherein said electrical contacts are on an underside of said substrate.

Claim 60 (new): The optoelectronic module of Claim 59, wherein said electrical contacts are configured to surface-mount said unit to the said main circuit board.

Claim 61 (new): The optoelectronic module of Claim 56, wherein said electronic circuit is mounted to a top of said substrate.

Claim 62 (new): The optoelectronic module of Claim 56, wherein said substrate is a circuit board and said first optical axis is substantially perpendicular to said circuit board.

Claim 63 (new): The optoelectronic module of Claim 16, wherein said optical device comprises one or more light emitters.

Claim 64 (new): The optoelectronic module of Claim 63, wherein said one or more light emitters comprises one or more laser diodes.

Claim 65 (new): The optoelectronic module of Claim 16, wherein said optical device comprises an array of light emitters or light detectors.

Claim 66 (new): The optoelectronic module of Claim 16, wherein said optical device comprises one or more photodiodes.

Claim 67 (new): The optoelectronic module of Claim 16, further comprising one or more optical lenses interposed between said optical device and said optical reflector.

Claim 68 (new): The optoelectronic module of Claim 67, wherein said one or more optical lenses comprise a convergent lens.

Claim 69 (new): The optoelectronic module of Claim 67, wherein said one or more optical lenses comprise a divergent lens.

Claim 70 (new): The optoelectronic module of Claim 67, wherein said one or more optical lenses and said optical reflector are formed as different surfaces of a unitary optical element of light transmitting material.

Claim 71 (new): The optoelectronic module of Claim 70, wherein said unitary optical element has a lenticular top surface and an internally reflecting bottom surface.

Claim 72 (new): The optoelectronic module of Claim 16, wherein said first optical path is directed so as to enter a hole in said main circuit board in a mounted condition of said unit and said optical reflector is arranged so as to direct said second optical path towards a side wall of said hole.

Claim 73 (new): The assembly of Claim 16, further comprising a substrate to which said optical device, said electronic circuit and said optical reflector are mounted.

Claim 74 (new): The optoelectronic module of Claim 73, wherein said substrate comprises a printed circuit interconnecting said electronic circuit and said optical device.

Claim 75 (new): The optoelectronic module of Claim 73, further comprising electrical contacts disposed on said substrate to mount and interconnect to a main circuit board.

Claim 76 (new): The optoelectronic module of Claim 75, wherein said electrical contacts are on an underside of said substrate.



Claim 77 (new): The optoelectronic module of Claim 76, wherein said electrical contacts are configured to surface-mount said unit to the said main circuit board.

Claim 78 (new): The optoelectronic module of Claim 73, wherein said electronic circuit is mounted to a top of said substrate.

Claim 79 (new): The optoelectronic module of Claim 73, wherein said substrate is a circuit board and said first optical axis is substantially perpendicular to said circuit board.

Claim 80 (new): The optoelectronic module of Claim 17, wherein said optical device comprises one or more light emitters.

Claim 81 (new): The optoelectronic module of Claim 80, wherein said one or more light emitters comprises one or more laser diodes.

Claim 82 (new): The optoelectronic module of Claim 17, wherein said optical device comprises an array of light emitters or light detectors.

Claim 83 (new): The optoelectronic module of Claim 17, wherein said optical device comprises one or more photodiodes.

Claim 84 (new): The optoelectronic module of Claim 17, further comprising one or more optical lenses interposed between said optical device and said optical reflector.

Claim 85 (new): The optoelectronic module of Claim 84, wherein said one or more optical lenses comprise a convergent lens.

Claim 86 (new): The optoelectronic module of Claim 84, wherein said one or more optical lenses comprise a divergent lens.

Claim 87 (new): The optoelectronic module of Claim 84, wherein said one or more optical lenses and said optical reflector are formed as different surfaces of a unitary optical element of light transmitting material.

Claim 88 (new): The optoelectronic module of Claim 87, wherein said unitary optical element has a lenticular top surface and an internally reflecting bottom surface.

Claim 89 (new): The optoelectronic module of Claim 17, wherein said first optical path is directed so as to enter a hole in said main circuit board in a mounted condition of said unit and said optical reflector is arranged so as to direct said second optical path towards a side wall of said hole.

Claim 90 (new): The assembly of Claim 17, further comprising a substrate to which said optical device, said electronic circuit and said optical reflector are mounted.

Claim 91 (new): The optoelectronic module of Claim 90, wherein said substrate comprises a printed circuit interconnecting said electronic circuit and said optical device.

Claim 92 (new): The optoelectronic module of Claim 90, further comprising electrical contacts disposed on said substrate to mount and interconnect to a main circuit board.

Claim 93 (new): The optoelectronic module of Claim 92, wherein said electrical contacts are on an underside of said substrate.

Claim 94 (new): The optoelectronic module of Claim 93, wherein said electrical contacts are configured to surface-mount said unit to the said main circuit board.

Claim 95 (new): The optoelectronic module of Claim 90, wherein said electronic circuit is mounted to a top of said substrate.

Claim 96 (new): The optoelectronic module of Claim 90, wherein said substrate is a circuit board and said first optical axis is substantially perpendicular to said circuit board.

Claim 97 (new): The optoelectronic module of Claim 18, wherein said optical device comprises one or more light emitters.

Claim 98 (new): The optoelectronic module of Claim 97, wherein said one or more light emitters comprises one or more laser diodes.

Claim 99 (new): The optoelectronic module of Claim 18, wherein said optical device comprises an array of light emitters or light detectors.

Claim 100 (new): The optoelectronic module of Claim 18, wherein said optical device comprises one or more photodiodes.

Claim 101 (new): The optoelectronic module of Claim 18, further comprising one or more optical lenses interposed between said optical device and said optical reflector.

Claim 102 (new): The optoelectronic module of Claim 101, wherein said one or more optical lenses comprise a convergent lens.

Claim 103 (new): The optoelectronic module of Claim 101, wherein said one or more optical lenses comprise a divergent lens.

Claim 104 (new): The optoelectronic module of Claim 101, wherein said one or more optical lenses and said optical reflector are formed as different surfaces of a unitary optical element of light transmitting material.

Claim 105 (new): The optoelectronic module of Claim 104, wherein said unitary optical element has a lenticular top surface and an internally reflecting bottom surface.

Claim 106 (new): The optoelectronic module of Claim 18, wherein said first optical path is directed so as to enter a hole in said main circuit board in a mounted condition of said unit and said optical reflector is arranged so as to direct said second optical path towards a side wall of said hole.

Claim 107 (new): The assembly of Claim 18, further comprising a substrate to which said optical device, said electronic circuit and said optical reflector are mounted.

Claim 108 (new): The optoelectronic module of Claim 107, wherein said substrate comprises a printed circuit interconnecting said electronic circuit and said optical device.

Claim 109 (new): The optoelectronic module of Claim 107, further comprising electrical contacts disposed on said substrate to mount and interconnect to a main circuit board.

Claim 110 (new): The optoelectronic module of Claim 109, wherein said electrical contacts are on an underside of said substrate.

Claim 111 (new): The optoelectronic module of Claim 110, wherein said electrical contacts are configured to surface-mount said unit to the said main circuit board.

Claim 112 (new): The optoelectronic module of Claim 107, wherein said electronic circuit is mounted to a top of said substrate.

Claim 113 (new): The optoelectronic module of Claim 107, wherein said substrate is a circuit board and said first optical axis is substantially perpendicular to said circuit board.

Claim 114 (new): An optoelectronic module comprising:  
an optical device configured to emit or detect a light signal along a first optical path;  
an electronic circuit connected to supply a drive signal to said optical device or to receive a signal detected by said optical device;

an optical reflector formed as a surface of a unitary optical element of light transmitting material and configured to redirect said light signal substantially radially corresponding to said first optical path along a second optical path substantially transverse to said first optical path; and

one or more optical lenses formed as another surface of said unitary optical element of light transmitting material having a lenticular top surface and an internally reflecting bottom surface, and interposed between said optical device and said optical reflector,

wherein said optical device, electronic circuit and optical reflector are assembled so as to be mounted as a unit to a main circuit board.